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5. The Hill connector (4) allows the pumping chamber to be defined by the bottom of the surface of Hill's weighted-ballasted piston (8), Hill cylinder walls (7) and enclosed bottom of cylinder (13).

6. The Hill connector (4) allows a pump stroke that is limited only by the length of the Hill cylinder (7) thereby being able to create a pumping chamber of any length required, without concern over the connector (4) or it's attachments, as is a necessary concern in the Anderson and Villanueva connector

CLAIMS

45.(new) A wave and tide actuated submersible pump for use in an open body of water, said wave and tide actuated submersible pump comprising a pump cylinder (7) having an open top end and a closed bottom end (13), said cylinder (7) is affixed to a structure located in an open body of water, connected to openings in the pump cylinder (7) near the closed bottom end (13), allow for the intake of water from the body of water by check valve means (11) and controlling the outflow of water from the pump by check valve means (12) to a remote location, a ballasted weighted piston (8) vertically reciprocally movable within the pump cylinder (7) and forming a pump chamber defined by said cylinder (7), said ballast weighted piston (8) and said lower closed bottom end (13), a buoy (1) connected to the ballast weighted piston (8) by a connector (4) for driving the ballast weighted piston (8) on an upward stroke in response to wave action, said ballast weighted piston (8) being driven in a

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1 downward stroke under force of gravity, a means for confining the upward stroke of the
2 ballast weighted piston (8) within the cylinder (7) and being attached to the top of the ballast
3 weighted piston (8) at a first end and to a lifting eye of the buoy (1) at a second end.

4 46. (new) The wave actuated submersible pump of claim 45 wherein said means for
5 restricting the upward stroke of the weighted piston is a plurality of stop pins (6) which are
6 securely attached and pass through openings adjacent said open top end of the pump
7 cylinder (7).

8 47. (new) The wave actuated submersible pump of claim 45 wherein said lower plate (15) is
9 a bottom plate end is suitable for imbedding the pump cylinder in the floor of the open body
10 of water.

11 48. (new) The wave actuated submersible pump of claim 45 wherein said lower plate (13)
12 enclosed end is a bottom flange plate for securing the pump cylinder to submerged
13 foundations at the floor of the open body of water.

14 49. (new) The wave actuated submersible pump of claim 45 wherein said ballast weighted
15 piston (8) includes sealing rings to provide a seal against the pump cylinder (7).

16 50. (new) The wave actuated submersible pump of claim 45 wherein said buoy (1) includes
17 a mooring eye (3) used to stabilize the direction of travel of the buoy (1).

18 51. (new) The wave actuated submersible pump of claim 45 wherein a mooring guide and
19 wear ring (5) mounted to the top open end of the pump cylinder (7), said connector (4)

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1 passing through the top of said cylinder said mooring guide and wear ring (5) and being
2 attached to the top of the ballast weighted piston (8) at a first end and to a lifting eye (2) of
3 the buoy (1) at a second end.

4 52. (new) The wave actuated submersible pump of claim 45 wherein said ballast weighted
5 piston (8) includes an air vent passageway (18), a check valve ball (19) and an air vent
6 chamber (34) for allowing air entrapped within the pump chamber to vent through the air
7 vent passageway and out the open top of the pump cylinder (7).

8 53. (new) The wave actuated submersible pump of claim 45 wherein the water pumped by
9 the submersible pump is delivered by outlet check valve means (12) to a hydro-electric
10 power plant (45).

11 54. (new) The wave actuated submersible pump of claim 45 wherein the water pumped by
12 the submersible pump is delivered by outlet check valve means (12) to pump contaminated
13 fluid into evaporation ponds or large bodies of water for mineral and chemical extraction,
14 refinement (41) and toxic waste removal from contaminated fluids (39).

15 55. ((new) The wave actuated submersible pump of claim 45 wherein the water pumped by
16 the submersible pump is delivered by outlet check valve means (12) to pump salt water,
17 creating large bodies of water and seas for the evaporation of said water thus forming
18 moisture laden clouds where prevailing winds will blow these clouds to natural and man
19 made barriers (50) causing rain to fall, creating new pasture and farmland (49) whilst

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1 moderating the earth's climate (51); said additional moisture will cleanse the atmosphere
2 and the whole cycle shall act as a radiator cooling the earth.

3 56. (new) The wave actuated submersible pump of claim 45 wherein the water pumped by
4 the submersible pump is delivered by outlet check valve means (12) to desalinate water
5 (47) using pumps as a source of energy to extract fresh water from the saltwater.

6 57. (new) The wave actuated submersible pump of claim 45 wherein the water pumped by
7 the submersible pump is delivered by outlet check valve means (12) to a levied reservoir to
8 raise sea animals and organisms for the harvesting of said sea animals and organisms (43).

9 58. (new) The wave actuated submersible pump of claim 45 wherein the water pumped by
10 the submersible pump is delivered outside a levied area by outlet check valve means (12) to
11 claim land from the sea by using these pumps with their suctions within the levied areas, to
12 pump water out of said levied area (42).

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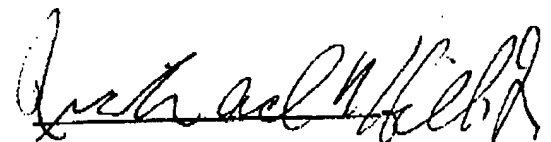
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Richard Newton Hill, Jr.